IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-10 (canceled)

11. (Previously Presented) A binary single phase titanium-zirconium alloy suitable for the production of surgical implants, said alloy comprising a zirconium content of less than 19% by weight but more than 10% by weight, 0.1% to 0.3% by weight of oxygen as a strength enhancing additive and not more than 1% by weight of other strength enhancing additives and technical impurities, the alloy being obtainable by a process involving the following steps:

(i) hot forging said alloy at a temperature above alpha/beta phase transition; and

(ii) rapidly cooling said alloy to obtain the single phase titanium-zirconium alloy;

wherein said alloy is subsequently cold processed and has a tensile strength of at least 769 MPa.

12-13. (Cancelled)

14. (Previously Presented) Titanium-zirconium alloy as claimed in claim 11, wherein the zirconium content is 14-15% by weight.

15. (Previously Presented) A device selected from the group consisting of implants in dental surgery, abutments and elements for suprastructrues comprising the titanium-zirconium alloy of claim 11.

16. (Previously Presented) A process for producing a surgical implant, said process

comprising incorporating into said implant a binary single phase titanium-zirconium alloy, said alloy comprising a zirconium content of less than 19% by weight but more than 10% by weight, 0.3% by weight of oxygen as a strength enhancing additive and not more than 1% by weight of other strength enhancing additives and technical impurities, the alloy being obtainable by a process involving the following steps:

(i) hot forging said alloy at a temperature above alpha/beta phase transition; and

(ii) rapidly cooling said alloy to obtain the single phase titanium-zirconium alloy;

wherein the forging process is carried out at temperatures above 850°C, the alloy is then cooled rapidly and subsequently cold worked; and

wherein said alloy has a tensile strength of at least 769 MPa.

17. (Previously Presented) A surgical implant comprising the titanium-zirconium alloy of claim 11.

18. (Previously Presented) An implants for dental surgery, abutments and elements for suprastructures as in Claim 17.

19. (Previously Presented) The titanium-zirconium alloy as in claim 11, wherein the alloy is hot forged and/or cold worked prior to processing into an implant.

20. (Previously Presented) A process for producing a surgical implant, said process comprising incorporating into said implant a binary single titanium-zirconium alloy, said alloy comprising a zirconium content of less than 19% by weight but more than 10% by weight, 0.3% by weight of oxygen as a strength enhancing additive and not more than 1% by weight of other strength enhancing additives and technical impurities, said process comprising:

(a) forging the alloy in the range of alpha/beta phase transition at 770°C to 830°C;

(b) cooling the alloy rapidly; and

(c) cold working the alloy;

wherein said alloy has a tensile strength of at least 769 MPa.

21. (Previously Presented) The titanium-zirconium alloy as in claim 11, comprising up to 0.5% by weight of hafnium as part of said technical impurities.

22. (Previously Presented) A surgical implant comprising a binary single phase titanium-zirconium alloy, said alloy comprising a zirconium content of less than 19% by weight but more than 10% by weight, 0.1% to 0.3% by weight of oxygen as a strength enhancing additive and not more than 1% by weight of other strength enhancing additives and technical impurities, the alloy being obtainable by a process involving the following steps:

(i) hot forging said alloy at a temperature above alpha/beta phase transition; and

(ii) rapidly cooling said alloy to obtain the single phase titanium-zirconium alloy;

wherein said alloy is subsequently cold processed and has a tensile strength of at least 769 MPa.

23. (Previously Presented) The surgical implant according to Claim 22, wherein the zirconium content is 14-15% by weight.